PERIODIC TEST- I

NAME: **SUBJECT: PHYSICS**
CLASS: XII   **M. MARKS:20**

General Instructions:
i. All questions are compulsory
ii. This question paper is divided into four sections – A, B and C,
iii. Section A contains two questions of 2 marks each, Section B contains three questions of 2 marks each,
iv. Section C contains two questions of 3 marks each.

Section A

Q1. Multiple choice questions.   **(1x4)**

i) If the sizes of charged bodies are very small compared to the distances between them, we treat them as

_____.

  a) Zero charges   b) Point charges   c) Single charge   d) No charges

ii) The force per unit charge is known as _____.
   a) Electric current   b) Electric potential   c) Electric field   d) Electric space

iii) The work done in moving a unit positive test charge over a closed path in an electric field is _____.
   a) Always 1   b) Infinite   c) Zero   d) Negative

iv) A surface that has the same electrostatic potential at every point on it is known as _____.
   a) Equal-potential surface
   b) Same potential surface
   c) Equi-magnitude surface
   d) Equipotential surface

Section B   **(2x5)**

Q2. State Coulombs law and derive equation for unit charge.

Q3. What is the force between two small charged spheres having charges of 2×10^{-7}C and 3×10^{-7} C

placed 30 cm apart in the air?

Q4. State gauss theorem in electrostatics.

Q5. Draw graph between electric field and distance due to charged sphere on the surface and outside the

sphere.

Q6. Draw the diagram of electric field due to a positive and negative charge.

Section C   **(3 x2)**

Q7. Derive an expression for the electric field intensity at a point on the axial line of a dipole?

Q8. Using gauss theorem find electric field due to charged sheet?

Or

Using gauss theorem find electric field due to charged infinitely long wire?